What Is Claimed Is:

1. A semiconductor device comprising:

a sealing member formed of an insulating resin;

a semiconductor element sealed by the sealing member;

a plurality of terminals formed by a metal film and exposed to a back surface of the sealing member; and

conductive wires positioned within the sealing member, ends on one side of the conductive wires being connected respectively to electrodes formed over the semiconductor element and opposite ends thereof being connected respectively to the terminals,

wherein the plural terminals are arrayed in plural rows and plural columns around the semiconductor element.

2. The semiconductor device according to claim 1, wherein a back surface of the semiconductor element, back surfaces of the terminals and the back surface of the sealing member lie over one and same plane, and the back surface of the semiconductor element and the back surfaces of the terminals are exposed from the sealing member.

3. The semiconductor device according to claim 1, wherein an insulating adhesive is provided over the back surface of the semiconductor element, a back surface of the adhesive, the back surfaces of the terminals and the back surface of the sealing member lie over one and same plane, and the back surface of the adhesive and the back

surfaces of the terminals are exposed from the sealing member.

4. The semiconductor device according to claim 3, wherein the adhesive is an adhesive tape.

5. The semiconductor device according to claim 1, wherein a conductor projecting from the back surface of the sealing member is formed over a surface of each of the terminals.

6. The semiconductor device according to claim 1, wherein a plating film projecting from the back surface of the sealing member is formed over the surface of each of the terminals, and a ball electrode is formed over the plating film.

7. The semiconductor device according to claim 1, wherein the terminals are arranged in a matrix form.

8. The semiconductor device according to claim 1, wherein the terminals are arranged in a matrix form, and of the terminals, a portion is connected to one or plural other terminals to form a wiring distribution terminal.

9. The semiconductor device according to claim 1, wherein the terminals each comprise a main metal layer and one or plural auxiliary metal layers formed over a main surface of the main metal layer or over both the main surface and a back surface of the main metal layer.

10. The semiconductor device according to claim 1, wherein the terminals each comprise a main metal layer and one or plural auxiliary metal layers formed over a main

surface of the main metal layer or over both the main surface and a back surface of the main metal layer, one of the auxiliary metal layers formed over the main surface of the main metal layer having a rough surface to provide a rough surface of each of the terminals.

11. The semiconductor device according to claim 1, wherein a single or plural semiconductor element fixing pieces formed of the same material as a material of the terminals are provided over the back surface of the semiconductor element, and the semiconductor element is fixed to the semiconductor element fixing piece or pieces through an adhesive.

12. The semiconductor device according to claim 11, wherein the terminals are arranged in a matrix form, and the plural semiconductor element fixing pieces are constituted by a portion of the terminals.

13. The semiconductor device according to claim 1, wherein a plurality of semiconductor elements are sealed within the sealing member.

14. The semiconductor device according to claim 1, wherein a plurality of semiconductor elements are sealed within the sealing member, and at least a portion(s) of the semiconductor elements is (are) fixed superimposedly over the other semiconductor element(s).

15. The semiconductor device according to claim 1, wherein the terminals are provided inside with respect to edges of the sealing member.

16. A semiconductor device according to claim 1, wherein a peelable, flexible tape is affixed to the back surface of the sealing member.

17. The semiconductor device according to claim 16, wherein the tape is a band-like tape, the sealing member is formed at predetermined intervals in a longitudinal direction of the tape, and the tape is wound round a reel.

18. A method of manufacturing a semiconductor device, comprising the steps of:

providing a flexible tape having a plurality of terminals in a product forming portion formed over a main surface of the tape, the terminals being formed by a metal film;

fixing a semiconductor element to the main surface of the tape;

connecting electrodes formed over the semiconductor element and the terminals with each other through conductive wires;

forming an insulating resin layer in an area including the semiconductor element and the wires over the main surface of the tape to cover the semiconductor element and the wires; and

peeling the tape from the insulating resin layer after covering the semiconductor element and the wires with the insulating resin layer.

19. The method according to claim 18, wherein the plurality of terminals are arrayed in plural rows and

plural columns around the semiconductor element.

20. The method according to claim 18, wherein, after peeling the tape, electrodes are formed respectively over back surfaces of the terminals exposed to a back surface of the insulating resin layer.

21. The method according to claim 20, wherein, after peeling the tape, a plating film is formed over the back surfaces of the terminals exposed to the back surface of the insulating resin layer to form electrodes projecting from the back surface of the insulating resin layer.

22. The method according to claim 20, wherein, after peeling the tape, ball electrodes projecting from the back surface of the insulating resin layer are formed over the back surfaces of the terminals exposed to the back surface of the insulating resin layer.

23. The method according to claim 18, wherein the semiconductor element is bonded to the tape through an insulating adhesive which is stronger in its adhesion to the semiconductor element than in its adhesion to the tape, and in the step of peeling the tape from the insulating resin layer, the tape is peeled while allowing the adhesive to remain over a back surface of the semiconductor element.

24. The method according to claim 23, wherein the adhesive is an adhesive tape.

25. The method according to claim 18, wherein the product forming portion comprises a semiconductor element

fixing tape surface for fixing the semiconductor element and a plurality of terminals arranged around the semiconductor element fixing tape surface.

26. The method according to claim 18, wherein the terminals are arranged in a matrix form in the product forming portion, and the semiconductor element is fixed over a portion of the plurality of terminals.

27. The method according to claim 18, wherein, simultaneously with formation of the terminals in the product forming portion, a semiconductor element fixing piece for fixing the semiconductor element is formed using the same material as a material of the terminals, and thereafter the semiconductor element is fixed over the semiconductor element fixing piece.

28. The method according to claim 18, wherein the tape is a band-like tape, and the fixing of the semiconductor element, the connection of the wires and the formation of the insulating resin layer are performed in this order in the longitudinal direction of the tape, and thereafter the tape is wound round a reel.

29. The method according to claim 18, wherein a plurality of the product forming portions are provided in a matrix form over the tape, and after the fixing of the semiconductor element and the connection of the wires, the insulating resin layer is formed so as to cover all of the product forming portions, thereafter, the tape is peeled from the insulating resin layer, and the insulating resin

layer is cut along boundaries of the product forming portions to fabricate a plurality of semiconductor devices.

30. The method according to claim 18, wherein the terminals are positioned inside with respect to outer periphery edges of the insulating resin layer.

31. The method according to claim 18, wherein a plurality of semiconductor elements are fixed to the product forming portion.

32. The method according to claim 18, wherein a plurality of semiconductor elements are fixed to the product forming portion.

33. The method according to claim 18, wherein the terminals are arranged in a matrix form in the product forming portion, and of the terminals, a portion is connected to one or plural other terminals to form a wiring distribution terminal.

34. The method according to claim 18, wherein the terminals each comprise a main metal layer and one or plural auxiliary metal layers formed over a main surface of the main metal layer or over both the main surface and a back surface of the main metal layer.

35. The method according to claim 34, wherein an auxiliary metal layer having a rough surface is formed over the main surface of the main metal layer to provide a rough surface over the main surface side of each of the terminals.

36. The method according to claim 34, wherein the

auxiliary metal layer over the main surface of each of the terminals is formed by a gold layer, or the outermost auxiliary metal layers over the main surface and the back surface of each of the terminals are formed by gold layers.

37. The method according to claim 34, wherein the main metal layer is a copper layer.

38. The method according to claim 18, wherein, of the steps of fixing the semiconductor element, connecting the wires and forming the insulating resin layer, one or plural steps are carried out while holding a back surface of the tape by vacuum suction.